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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,555	04/30/2001	Keishi Danjo	35.G2791	7015

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EXAMINER

HARPER, HOLLY R

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/846,555

Applicant(s)

DANJO ET AL.

Examiner

Holly R. Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaneko et al. (USPN 6,087,770) hereinafter "Kaneko".

The Kaneko reference discloses an electron source and an image display member that forms an image display apparatus (Abstract). The reference discloses a substrate and a film composed of conductive particles (an antistatic film). The film is on the bottom substrate (Column 10, Lines 23-26 and Figure 3, Elements 2 and 3).

2. Claims 3 and 28-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Shibata et al. (USPN 6,184,610) hereinafter "Shibata".

In regard to claim 3 and 31, the Shibata reference discloses an electron emitting device, an electron source, and an image forming apparatus (Column 1, Lines 8-10). The reference discloses electrodes (Figure 21A, Elements 3 and 4) and an insulation layer made of SiO₂, which can be sodium blocking, on the surface of the back substrate (Column 20, Lines 36-39).

In regard to claim 28, the Shibata reference discloses an electron emitting device disposed on the insulating layer (Figure 21A, Element 3 and Column 1, Lines 8-10).

In regard to claim 29 and 33, the Shibata reference discloses an electroconductive film having an electron emitting portion (Figure 21A, Element 4).

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In regard to claim 30 and 34, the Shibata reference discloses a display panel that can be used for an image-forming apparatus comprising an electron source with a matrix wiring arrangement according to the invention (Figure 10).

In regard to claim 32, the Shibata reference discloses a support member between the electron source and the image display (Figure 10, Element 112).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata (USPN 6,184,610) in view of Kawamura et al. (US RE37,183 E) hereinafter "Kawamura".

In regard to claims 4-10, the Shibata reference discloses the limitations of claim 3 discussed above. The Shibata reference also discloses that the substrate is made of glass and a SiO₂ film (Column 6, Lines 4-9). The Shibata reference does not specify that the insulation layer, the SiO₂ layer, is made with a metal oxide. The Kawamura reference teaches that electroconductive metal oxide particles of tin, antimony, or indium (Column 5, Lines 35-37) are included in the SiO₂ layer to improve the strength of the film (Column 5, Lines 63-64). This film can act as an anti-static, sodium blocking, and insulating film. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate

metal oxide particles, as taught by Kawamura, into the SiO₂ film to increase the strength of the film.

5. Claims 11, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko (USPN 6,087,770) in view of Kerslick et al. (USPN 6,465,954 B2) hereinafter "Kerslick".

The Kaneko reference discloses an electron source and an image display member that forms an image display apparatus (Abstract). The reference discloses a substrate and a film composed of conductive particles (an antistatic film). The film is on the bottom substrate (Column 10, Lines 23-26 and Figure 3, Elements 2 and 3). The Kaneko discloses that a getter material is used (Column 19, Lines 33-37), but does not specify where it is located. The Kerslick reference teaches that the getter material can be used to form the cathode (Column 2, Lines 47-50) of a field emission device (Column 1, Lines 45-46). The specified composition allows for smaller and simpler design (Column 2, Lines 50-52). Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to use a getter material to form a cathode, as taught by Kerslick, to allow for a smaller and more simple design.

6. Claims 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al. (USPN 6,184,610) hereinafter "Shibata" in view of Kerslick et al. (USPN 6,465,954 B2) hereinafter "Kerslick".

The Shibata reference discloses an electron emitting device, an electron source, and an image forming apparatus (Column 1, Lines 8-10). The reference discloses an insulation layer made of SiO₂, which can be sodium blocking, on the surface of the back substrate (Column 20, Lines 36-39). The reference discloses a getter material (Column 22, Lines 40-41), but does not

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specify where it is located. The Kerslick reference teaches that the getter material can be used to form the cathode (Column 2, Lines 47-50) of a field emission device (Column 1, Lines 45-46).

The specified composition allows for smaller and simpler design (Column 2, Lines 50-52).

Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to use a getter material to form the electron source, as taught by Kerslick, to create a smaller and more simple design.

7. Claims 13-17 and 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata (USPN 6,184,610) in view of Kawamura et al. (US RE37,183 E) hereinafter "Kawamura" in view of Kerslick et al. (USPN 6,465,954 B2) hereinafter "Kerslick".

The Shibata reference discloses the limitations of claim 20 discussed above. The Shibata reference also discloses that the substrate is made of glass and a SiO₂ film (Column 6, Lines 4-9). The Shibata reference does not specify that the insulation layer, the SiO₂ layer, is made with a metal oxide or the location of the getter material. The Kawamura reference teaches that electroconductive metal oxide particles of tin, antimony, or indium (Column 5, Lines 35-37) are included in the SiO₂ layer to improve the strength of the film (Column 5, Lines 63-64). This film can act as an anti-static, sodium blocking, and insulating film. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate metal oxide particles, as taught by Kawamura, into the SiO₂ film to increase the strength of the film.

The Shibata reference discloses a getter material (Column 22, Lines 40-41), but does not specify where it is located. The Kerslick reference teaches that the getter material can be used to form the cathode (Column 2, Lines 47-50) of a field emission device (Column 1, Lines 45-46).

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The specified composition allows for smaller and simpler design (Column 2, Lines 50-52).

Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to use a getter material to form the electron source, as taught by Kerslick, to create a smaller and more simple design.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Harper whose telephone number is (703) 305-7908. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (703) 305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Holly Harper
Patent Examiner
Art Unit 2879


ASHOK PATEL
PRIMARY EXAMINER